JOURNAL OF APPLIED BEHAVIOR ANALYSIS 1999, **32,** 115–118 NUMBER 1 (SPRING 1999)

AN EXPANSION OF THE PEER-TUTORING PARADIGM: CROSS-AGE PEER TUTORING OF SOCIAL SKILLS AMONG SOCIALLY REJECTED BOYS

THOMAS P. GUMPEL AND RACHEL FRANK

THE HEBREW UNIVERSITY OF JERUSALEM

We examined the effects of a cross-age peer-tutoring program on the social skills of 2 sixth-grade and 2 kindergarten socially rejected and isolated boys. Peer tutoring consisted of the older boys conducting social skills training with their younger tutees. The frequency of positive social interactions increased for all 4 boys, with maintenance of treatment gains following a 5-week interval.

DESCRIPTORS: social skills, peer tutoring, cross-age tutoring

Capitalizing on the salience of peers as discriminative stimuli in the child's natural environment, several studies have examined the effects of peer-mediated social skills training (McMahon, Wacker, Sasso, Berg, & Newton, 1996; Odom, Chandler, Ostrosky, McConnel, & Reaney, 1992). These studies typically involve children without disabilities as the peer tutor and report dependent measures derived solely from the behavior of the tutees. Few studies have utilized peers as social skills tutors and obtained social interaction outcomes from both tutors and tutees.

We attempted to include self-management procedures within a cross-age peer-tutoring social skills training procedure based on Gumpel's (1994) multicomponent model of social competence. We hypothesized that even though the treatment intervention ostensibly focused on younger tutees, collateral positive effects could occur in the social interactions of the older tutors as well.

We thank Jeremy Cantor for his generous support for this research. We also thank Irit Gal and Rita Geldman for their patient and skillful assistance.

Address correspondence and requests for reprints to Tom Gumpel, School of Education, The Hebrew University, Jerusalem 91905, Israel (E-mail: tgumpel@vms.huji.ac.il).

METHOD

Participants and Setting

All 4 participants attended the same elementary school. Beni (aged 12 years) and Avi (aged 11 years 5 months) attended different sixth-grade classes and tutored Ziv and Yigal (both aged 5 years), who were in separate kindergarten classes. All 4 boys were nominated for the study by classroom teachers because of their social isolation and peer rejection.

Data Collection and Design

All data were collected on the school playground by two observers using a momentary time-sampling (20 s) system. Observers were naive to the purpose of the intervention and were trained to at least a 90% level of reliability for both the occurrence and nonoccurrence of each of the dependent variables (a) *No interaction* was defined as any behavior that did not involve social interaction, including the child playing a game by himself. (b) *Positive interaction* was defined as any instance in which the child was engaged in a positive social interaction with one or more children, but did not include any sort of aggressive act such as cursing, shouting, pushing, name calling, hitting, and making forceful bodily contact with someone else.

Observations took place twice per day, during morning and afternoon recess. Interobserver agreement was assessed across all 4 participants and all three experimental conditions during a total of 35% of all observations. Occurrence and nonoccurrence agreements were calculated on an interval-by-interval basis by dividing the agreements by the total number of agreements and disagreements multiplied by 100%. The mean occurrence reliability for positive interactions was 89% (range, 86% to 95%) and for no interactions was 88% (range, 85% to 91%), and the mean nonoccurrence reliability for positive interactions was 90% (range, 85% to 93%) and for no interactions was 90% (range, 87% to 93%).

Treatment Conditions

Baseline. All baseline data were collected during recess periods prior to the initiation of the first treatment phase. There was no direct contact between researchers and participants during the baseline phase.

Adult-mediated training. Both Avi and Beni met individually with the second author for six to eight 45-min meetings over a 1½-week period. Tutors were taught to engage in each of the five components of Gumpel's (1994) model of social competence: to identify appropriate social discriminative stimuli, to enumerate possible behavioral options, to enter into that social interaction, to self-monitor, and to observe the environmental reaction.

Peer tutoring. Each tutor met alone with his tutee four times per week and taught him to engage in each step of the model of social competence. All training was conducted in the classroom, in the kindergarten, or on the playground. During these meetings, the tutor and tutee were to engage in a short discussion of the tutee's social behaviors since their last meeting. The tutor would also examine the younger child's self-monitoring sheets and, if needed, would review different parts of the model of social competence.

Maintenance. The maintenance phase was identical to the baseline phase. That is, no instructional feedback was given to any of the 4 boys, and there was no contact between the tutors and the researchers.

RESULTS AND DISCUSSION

Results were similar for all 4 boys, showing a clear stabilizing of positive social skills as measured by the frequencies of social interactions (see Figure 1). Even for Avi, whose no-interaction behaviors were cyclical during his baseline phase, an improvement in positive interactions was evident during the treatment phase, with some reversal during the maintenance phase.

Results demonstrate that traditional peer tutoring and cross-age tutoring can be expanded to the nonacademic domains of social skills training and that the treatment may positively affect the social skills of both tutors and tutees. It is important to emphasize that the tutors were not informed that they were also a focus of the treatment, yet their data showed marked behavioral improvements. Although all boys benefited from the intervention, Avi's maintenance data were mixed. Nevertheless, positive social interactions during maintenance were higher than those in baseline for all youths. An important question is whether classroom teachers can be trained and would be willing to maintain an intensive cross-age tutoring program. Anecdotal responses from other teachers in the school were positive, with several expressing willingness to begin such a program in their own classrooms. To address the question more empirically, however, future research should incorporate measures of social validity. A limitation of this study involves the lack of treatment integrity data regarding the tutor–tutee meetings. In addition, the analysis employed does not al-

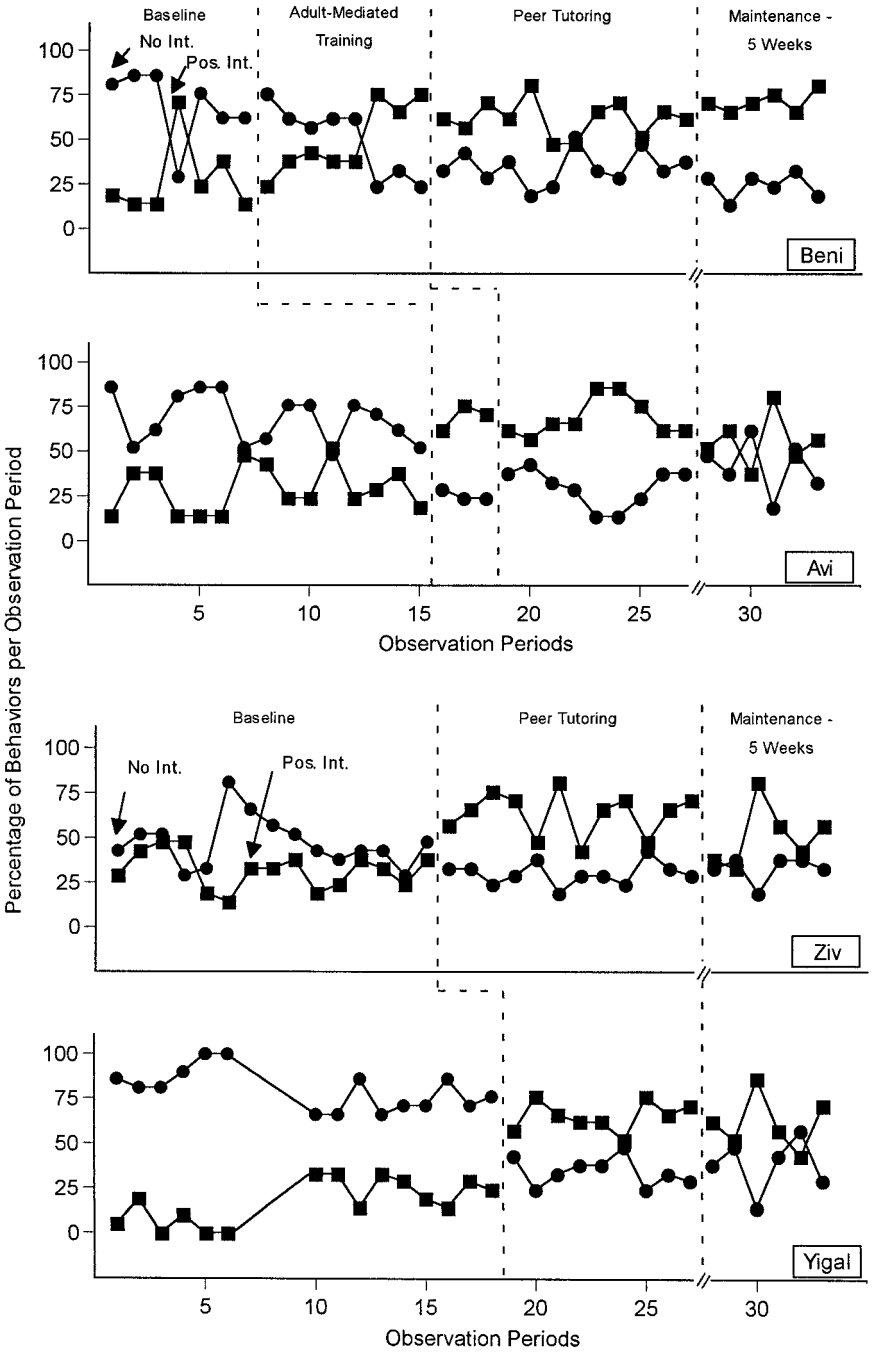

Figure 1. Results for tutors (Beni and Avi) and tutees (Ziv and Yigal) showing no interaction and positive interaction. Each data point represents one observation time (i.e., recess period). Yigal was absent from school for Sessions 7 through 9 of the baseline phase.

low determination of the elements in the treatment package that actually influenced social behaviors. Audiotaping tutor–tutee meetings is one potential method researchers might use to evaluate treatment fidelity and to document functional components. These limitations notwithstanding, the results suggest that social skills tutoring may benefit tutors and tutees alike, even if both have social skills deficits, and that is a possibility worthy of future exploration.

REFERENCES

Gumpel, T. (1994). Social competence and social skills training for persons with mental retardation: An expansion of a behavioral paradigm. *Education and Training in Mental Retardation and Developmental Disabilities, 29*(3), 194–201.

McMahon, C. M., Wacker, D. P., Sasso, G. M., Berg, W. K., & Newton, S. M. (1996). Analysis of frequency and type of interaction in peer-mediated social skills intervention: Instructional vs. social interactions. *Education and Training in Mental Retardation and Developmental Disabilities, 31,* 339–352.

Odom, S., Chandler, L. K., Ostrosky, M., McConnel, S. R., & Reaney, S. (1992). Fading teacher prompts from peer-initiation interventions for young children with disabilities. *Journal of Applied Behavior Analysis, 25,* 307–317.

Received February 20, 1998
Initial editorial decision April 6, 1998
Final acceptance September 10, 1998
Action Editor, Patrick C. Friman